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# PATENT ABSTRACTS OF JAPAN

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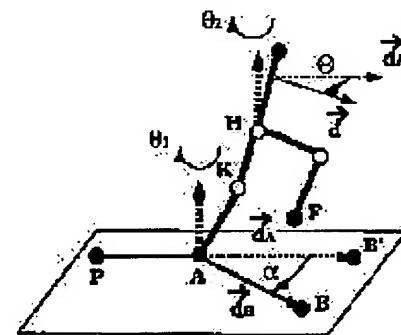
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## (54) PROCESSING METHOD FOR GENERATING WALKING OPERATION

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To attain a numerized walking operation model considering also right and left asymmetry by synthesizing a method for generating straight walking operation from a certain position to another position on a straight line and a method for generating rotating operation around a certain axis.

**SOLUTION:** An initial/final condition calculating means calculates an initial condition and a final condition such as a position on a human body model and a joint angle so that foot parts can be landed on walking points set on a curved route. When a supporting foot is put on a point A and a free foot is moved from P to B in the case of turning a direction from the point A to the point B, a straight walking operation generating means moves the free foot to a point B' separated from the point A by a distance equal to a segment AB and having the same walking direction, a rotational operation generating means generates rotation so that the free foot arrives at the point B during the generation of walking operation to the point B' by the straight walking operation generating means and an operation synthesizing means synthesizes both the operation. Consequently forward walking operation fixing the supporting foot on the point A and moving the free foot from the point P to the point B while turning its direction is generated.



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